October 18, 2017

BY ELECTRONIC FILING

Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Re: *Use of Spectrum Bands Above 24 GHz for Mobile Radio Services, et. al.*, GN Docket No. 14-177, IB Docket No. 15-256, WT Docket No. 10-112, and IB Docket No. 97-95

Dear Ms. Dortch:

On October 16, 2017, representatives of EchoStar Satellite Operating Corporation and Hughes Network Systems, LLC (collectively, "EchoStar"), Intelsat Corporation ("Intelsat"), SES Americom, Inc. and O3b Limited (collectively, "SES"), Telesat Canada ("Telesat"), The Boeing Company ("Boeing"), and WorldVu Satellites Ltd. d/b/a OneWeb ("OneWeb") (collectively, the "Satellite Broadband Companies") met separately with Chairman Pai, Commissioner O'Rielly, Commissioner Carr, and their respective advisors, regarding pending petitions for reconsideration and the pending further notice of proposed rulemaking in the above referenced proceeding. The attendees at each meeting are listed on Attachment 1 hereto.

In each meeting, the Satellite Broadband Companies' representatives discussed their efforts to support disaster relief in the wake of hurricanes Harvey and Irma, and provided an overview of their respective company's current and future operations in some of the bands under consideration in this proceeding. The parties also discussed the attached presentation, which sets out the Satellite Broadband Companies' proposals to facilitate intensive and equitable use of high-band spectrum by 5G platforms in the Fixed-Satellites Service ("FSS") and Upper Microwave Flexible Use Service ("UMFUS"). These proposals are designed to ensure that both FSS and UMFUS operators will have sufficient access to the scarce spectrum resources they need in order to meet the growing demands of U.S. broadband consumers.

Respectfully submitted,

/s/ Jennifer A. Manner
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Attachments

cc: Rachael Bender
Brooke Ericson
Kevin Holmes

ATTACHMENT 1

Meeting Attendees

Office of Chairman Pai

Chairman Pai
Rachael Bender

Office of Commissioner O'Rielly

Commissioner O'Rielly
Brooke Ericson

Office of Commissioner Carr

Commissioner Carr
Kevin Holmes

Satellite Broadband Company Representatives

EchoStar: Pradman Kaul and Jennifer Manner
Intelsat: Steve Spengler and Hazem Moakkit
SES: Karim Sabbagh and Gerry Oberst
Telesat: Daniel Goldberg
Boeing: Chris Johnson and Jeff Trauberman
OneWeb: Greg Wyler and Larry Adler

THE FCC MUST ADOPT RULES FOR THE MILLIMETER WAVE BANDS THAT ENABLE USE BY BOTH SATELLITE AND TERRESTRIAL WIRELESS SYSTEMS

- Satellite operators have answered the call for broadband satellite services by deploying Ka-band space stations that provide coverage throughout the United States with speeds available at 25/3 Mbps and above. Today there are approximately 2 million broadband customers across North America who enjoy these next-generation services, and more coming all the time.

- In order to keep up with consumer demand, new systems have been proposed and are under construction, not just in the Ka-band, but also the bands above 30 GHz including the 40 and 50 GHz bands.

- These new systems will serve an important part of the 5G infrastructure, giving users access to a competitive platform that provides highly reliable broadband services, even in the most rural and underdeveloped areas of the U.S. – exactly what we need to help close the digital divide.

- In the Spectrum Frontiers proceeding, satellite operators have proposed rules for deployment of Fixed Satellite Service (FSS) earth stations in the Ka- and V-bands that are designed to facilitate intensive and equitable use by 5G platforms in the FSS and the Upper Microwave Flexible Use Service (UMFUS).

    - Want to ensure that both services have sufficient access to the scarce spectrum resources they need to meet the ever-growing demands of U.S. consumers and to make the most efficient use of spectrum resources.

    - The right rules will facilitate rapid development of both satellite and terrestrial broadband systems capable of providing advanced communications services to Americans no matter where they live, helping to close the digital divide and to increase competition for 5G and other advanced communications services.

On Reconsideration:

- The FCC has adopted rules that limit conditions under which FSS operators could deploy earth stations in the 27.5-28.35 GHz (28 GHz) and 37.5-40.0 GHz (39 GHz) bands. Those rules should be revised to better achieve the FCC's goals without unnecessarily inhibiting satellite deployment, as follows:

1. ***Adopt a revised population coverage limit for FSS earth stations in the 28 GHz and 39 GHz bands.***

- The current rule limiting FSS earth stations to aggregate coverage of 0.1% of population in a UMFUS license area may have the effect of unduly limiting earth station deployment in less populated areas – *i.e.*, the areas least likely to conflict with UMFUS deployment.
- By adopting a sliding scale that varies with the population density in a given license area, the FCC would create a framework that allows FSS operators to site additional earth stations in areas with relatively low population densities.

2. ***Clarify Transient Population Limits.***

- The FCC must provide additional clarity for FSS earth station deployment near areas where people gather for events or for travel. The current rules are overinclusive and could lead to both confusion and absurd results.
- By adopting common sense definitions, the FCC can ensure that terrestrial and satellite broadband services are able to be deployed expeditiously to meet user demand. For example, defining "major event venue" as one with a capacity of 10,000 or more would cover all NFL/MLB/NBA/NHL venues, and major college venues as well, but make clear that smaller venues are no barrier to deployment.

3. ***Eliminate the limit on FSS operators to three earth stations in any given county (for 28 GHz) or Partial Economic Area (for 39 GHz).***

- These rules prevent FSS operators from locating multiple earth station facilities in areas where they would have little or no impact on UMFUS, and are not necessary to protect UMFUS because of other protections (*e.g.*, population coverage and transient population limits)

4. ***Permit FSS individually licensed earth stations and end user terminals in the 42.0-42.5 GHz band.***

- The record demonstrates that individually licensed satellite earth stations and blanket licensed end user terminals can receive signals on an opportunistic basis in the 42.0-42.5 GHz band (in the same manner as in the 37.5-40.0 GHz band) without encumbering UMFUS systems.

5. ***Apply the 70/80/90 GHz Band Database Approach to UMFUS Facilities.***

- Database identifies where UMFUS has actually deployed.
- Would provide a streamlined way for FSS operators to identify areas of minimal UMFUS interest that they could target for use by earth stations and eliminate the need for UMFUS operators to respond to numerous requests for coordination.

Further Notice:

- In order to ensure that that valuable V-band spectrum is used efficiently and equitably, the Satellite Broadband Companies propose that the FCC should:

1. ***Preserve designation of the 48.2-50.2 GHz band as primary for FSS uplinks.***

   - Continues the current designation of this band, as this is one of the few slices of spectrum in which satellite operators can deploy user terminals on a widespread basis with full protection against interference from other services, which permits more efficient deployment.
   - Corresponds to the 40-42 GHz band, which is designated as exclusive to FSS downlinks.

2. ***Give FSS greater and more equitable access to the 47.2-48.2, 50.4-51.4 and 51.4-52.4 GHz bands for individually-licensed earth stations.***

   - FSS operators have clearly demonstrated their commitment to developing these bands for both GSO and NGSO operations.
   - Individually-licensed earth stations, because of the propagation characteristics of this spectrum, do not affect a large area.
   - Terrestrial systems are likely to use this spectrum to target densely populated urban areas, leaving much of the country at risk of not benefiting from 5G technologies.
   - Yet current proposals would not allow satellite operators to deploy meaningfully in these greenfield bands. The FCC should reconsider the proposals it has put forward.

3. ***Permit FSS networks to operate earth stations and end user terminals in the 37.5-40.0 GHz band.***

   - The Commission has previously concluded that individually licensed gateway earth stations should be permitted on a protected basis in the 37.5-40.0 GHz band.
   - The record in this proceeding additionally demonstrates that blanket licensed satellite end user terminals can receive signals on an opportunistic basis in the 37.5-40.0 GHz band without encumbering UMFUS.
   - Access to the 37.5-40.0 GHz band is necessary to ensure that satellites can provide downlink transmissions at very high data rates to end users in all locations.

We are excited to be part of the 5G ecosystem and to play our part in delivering advanced broadband services to consumers across the U.S., including those in rural and other underserved areas. We believe that the proposals discussed today will unleash satellite operators to achieve these goals while imposing no more than minimal constraints on UMFUS deployment.